

# ABSTRACT OF THE DISCLOSURE

A two-dimensional wavelet transform processing apparatus, more effectively utilizing hardware resource, is realized with reduced hardware construction. For this purpose, the filter processing apparatus has a vertical DWT processor (901) for performing filter processing on image data and outputting 2 types of data obtained by the processing as 1 pair of data, a rotation unit (903) for rearranging the data outputted from the vertical DWT processor by rotating the data by  $90^\circ$  by 2 pairs and outputting the data, and a horizontal DWT processor (905) for performing filter processing on the image data rearranged by the rotation unit and outputting 2 types of data obtained by the processing as 1 pair of data.